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Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

- 1. (Currently Amended) A compound obtainable by combining:
 - (a) a Group VIIIB metal or a compound thereof; and,
 - (b) a compound of formula I or salt thereof:

$$\begin{array}{c} X^4 \\ Q^1 - X^3 \\ A_2 \\ X^2 \\ (L_2)_m \\ (L_1)_n \end{array} \tag{I}$$

wherein:

 A_1 and A_2 , and A_3 , A_4 and A_5 (when present), each independently represent lower alkylene;

K is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro, $-OR^{19}$, $-OC(O)R^{20}$, $-C(O)R^{21}$, $-C(O)OR^{22}$, $-N(R^{23})R^{24}$, $-C(O)N(R^{25})R^{26}$, $-C(S)(R^{27})R^{28}$, $-SR^{29}$, $-C(O)SR^{30}$, $-CF_3$ or $-A_3-Q^3(X^5)X^6$;

D is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro, $-OR^{19}$, $-OC(O)R^{20}$, $-C(O)R^{21}$, $-C(O)OR^{22}$, $-N(R^{23})R^{24}$, $-C(O)N(R^{25})R^{26}$, $-C(S)(R^{27})R^{28}$, $-SR^{29}$, $-C(O)SR^{30}$, $-CF_3$ or $A_4-Q^4(X^7)X^8$;

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E is selected from the group consisting of hydrogen, lower alkyl, aryl, Het, halo, cyano, nitro,- OR^{19} , $-OC(O)R^{20}$, $-C(O)R^{21}$, $-C(O)OR^{22}$, $-N(R^{23})R^{24}$, $-C(O)N(R^{25})R^{26}$, $-C(S)(R^{27})R^{28}$, $-SR^{29}$, $-C(O)SR^{30}$, $-CF_3$ or $-A_5-Q^5(X^9)X^{10}$;

or both D and E together with the carbon atoms of the cyclopentadienyl ring to which they are attached form an optionally substituted phenyl ring:

 X^1 represents CR^1 (R^2) (R^3), congressyl or adamantyl, X^2 represents CR^4 (R^5) (R^6), congressyl or adamantyl, or X^1 and X^2 together with Q^2 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula la;

X³ represents CR⁷ (R⁸) (R⁹), congressyl or adamantyl, X⁴ represents CR¹⁰ (R¹¹) (R¹²), congressyl or adamantyl, or X³ and X⁴ together with Q¹ to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X³ and X⁴ together with Q¹ to which they are attached form a ring system of formula lb;

 X^5 represents $CR^{13}(R^{14})(R^{15})$, congressyl or adamantyl, X^6 represents CR^{16} (R^{17})(R^{18}), congressyl or adamantyl, or X^5 and X^6 together with Q^3 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^5 and X^6 together with Q^3 to which they are attached form a ring system of formula lc;

 X^7 represents $CR^{31}(R^{32})(R^{33})$, congressyl or adamantyl, X^8 represents $CR^{34}(R^{35})(R^{36})$, congressyl or adamantyl, or X^7 and X^8 together with Q^4 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^7 and X^8 together with Q^4 to which they are attached form a ring system of formula 1d;

 X^9 represents $CR^{37}(R^{38})(R^{39})$, congressyl or adamantyl, X^{10} represents $CR^{40}(R^{41})$ (R^{42}), congressyl or adamantyl, or X^9 and X^{10} together with Q^5 to which they are attached form an optionally substituted 2-phospha-adamantyl group, or X^9 and X^{10} together with Q^5 to which they are attached form a ring system of formula le;

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Q¹ and Q², and Q³, Q⁴ and Q⁵ (when present), each independently represent phosphorus, arsenic or antimony;

M represents a Group VIB or VIIIB metal or metal cation thereof;

L₁ represents an optionally substituted cyclopentadienyl, indenyl or aryl group;

 L_2 represents one or more ligands each of which are independently selected from hydrogen, lower alkyl, alkylaryl, halo, CO, P (R^{43})(R^{44}) R^{45} or N(R^{46})(R^{47}) R^{48} ;

R¹ to R¹⁸ and R³¹ to R⁴², when present, each independently represent hydrogen, lower alkyl, aryl, halo or Het;

 R^{19} to R^{30} and R^{43} to R^{48} , when present, each independently represent hydrogen, lower alkyl, aryl or Het;

the ring systems of formula 1a, 1b, 1c, 1d and le are represented by the formulae

$$R^{49}$$
 R^{50}
 R^{51}
 R^{52}
 R^{52}
 R^{52}
(1a)

$$R^{49}$$
 H R^{54} R^{50} R^{51} R^{52} (1b)

$$R^{49}$$
 H R^{54} R^{50} R^{51} Q^1 R^{52} (1c)

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$$R^{49}$$
 H R^{54} R^{50} R^{51} R^{52} (!d) R^{50} R^{51} R^{52} (1e)

 R^{49} , R^{54} and R^{55} , each independently represent hydrogen, lower alkyl or aryl; R^{50} to R^{53} each independently represent hydrogen, lower alkyl, aryl or Het; and Y¹, Y², Y³, Y⁴ and Y⁵, each independently represent oxygen, sulfur or N-R⁵⁵;

n = 0 or 1;

and m = 0 to 5;

provided that when n = 1 then m equals 0, and when n equals 0 then m does not equal 0.

- 2. (Original) A compound as claimed in claim 1, wherein if both K represents A_3 -Q³ (X⁵) X⁶ and E represents A_5 -Q⁵ (X⁹) X¹⁰, then D represents A_4 -Q⁴(X⁷)X⁸.
- 3. (Previously presented) A compound as claimed in claim 1, wherein R^1 to R^{18} and R^{31} to R^{42} each independently represent hydrogen, optionally substituted C_1 - C_6 alkyl or optionally substituted phenyl.
- 4. (Previously presented) A compound as claimed in claim 1, wherein R^1 to R^{18} and R^{31} to R^{42} each independently represent hydrogen or non-substituted C_1 - C_6 alkyl.
- 5. (Previously presented) A compound as claimed in claim 1, wherein one or more of the groups R¹ to R³, R⁴ to R⁶, R⁷ to R⁹, R¹⁰ to R¹², R¹³ to R¹⁵, R¹⁶ to R¹⁸, R³¹

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to R³³, R³⁴ to R³⁶, R³⁷ to R³⁹, R⁴⁰ to R⁴² together with the carbon atom to which they are attached each independently form a cyclic alkyl structure.

- 6. (Previously presented) A compound as claimed in claim 1, wherein one or more of the groups R¹ and R², R⁴ and R⁵, R⁷ and R⁸, R¹⁰ and R¹¹, R¹³ and R¹⁴, R¹⁶ and R¹⁷, R³¹ and R³², R³⁴ and R³⁵, R³⁷ and R³⁸, R⁴⁰ and R⁴¹ together with the carbon atom to which they are attached each independently form a cyclic alkyl structure.
- 7. (Previously presented) A compound as claimed in claim 1, wherein each of R¹ to R¹⁸ and R³¹ to R⁴² does not represent hydrogen.
- 8. (Previously presented) A compound as claimed in claim 1, wherein adamantyl represents unsubstituted adamantyl or adamantyl substituted with one or more unsubstituted C₁-C₈ alkyl substituents, or a combination thereof.
- 9. (Previously presented) A compound as claimed in claim 1, wherein 2-phospha-adamantyl represents unsubstituted 2-phospha-adamantyl or 2-phospha-adamantyl substituted with one or more unsubstituted C₁-C₈ alkyl substituents, or a combination thereof.
- 10. (Previously presented) A compound as claimed in claim 1, wherein 2-phospha-adamantyl includes one or more oxygen atoms in the 2-phospha-adamantyl skeleton.
- 11. (Previously presented) A compound as claimed in claim 1, wherein congressyl represents unsubstituted congressyl.
- 12. (Previously presented) A compound as claimed in claim 1, wherein R^{50} to R^{53} each independently represent optionally substituted C_1 - C_6 alkyl, trifluoromethyl or phenyl optionally substituted with non-substituted C_1 - C_6 alkyl or OR^{19} where R^{19} represents non-substituted C_1 - C_6 alkyl.

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- 13. (Previously presented) A compound as claimed in claim 1, wherein R^{49} and R^{54} each independently represent hydrogen or non-substituted C_1 - C_6 alkyl.
- 14. (Previously presented) A compound as claimed in claim 1, wherein each of Y^1 to Y^5 represents oxygen.
- 15. (Previously presented) A compound as claimed in claim 1, wherein X^1 is identical to X^3 , and X^5 , X^7 and X^9 when present.
- 16. (Previously presented) A compound as claimed in claim 1, wherein X^2 is identical to X^4 , and X^6 , X^8 and X^{10} when present.
- 17. (Previously presented) A compound as claimed in claim 1, wherein X^1 represents CR^1 (R^2) (R^3), X^2 represents CR^4 (R^5)(R^6), X^3 represents CR^7 (R^8)(R^9) and X^4 represents CR^{10} (R^{11}) (R^{12}).
- 18. (Previously presented) A compound as claimed in claim 1, wherein X^1 represents CR^1 (R^2) (R^3), X^2 represents adamantyl, X^3 represents CR^7 (R^8)(R^9) and X^4 represents adamantyl.
- 19. (Previously presented) A compound as claimed in claim 1, wherein X^1 represents CR^1 (R^2) (R^3), X^2 represents congressyl, X^3 represents CR^7 (R^8) (R^9) and X^4 represents congressyl.
- 20. (Previously presented) A compound as claimed in claim 1, wherein X¹ to X⁴ each independently represent adamantyl.
- 21. (Previously presented) A compound as claimed in claim 1, wherein X¹ to X⁴ each independently represent congressyl.

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- 22. (Previously presented) A compound as claimed in claim 1, wherein X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula la, and X^3 and X^4 together with Q^1 to which they are attached form a ring system of formula lb. 23. (Currently amended) A compound as claimed in claim 1, wherein X^1 and X^2 together with Q^2 to which they are attached form a 2-phospha-adamantyl group, and X^3 and X^4 together with Q^1 to which they are attached form a 2- phospha-adamantyl group.
- 24. (Previously presented) A compound as claimed in claim 1, wherein K represents hydrogen.
- 25. (Previously presented) A compound as claimed in claim 1, wherein K represents $-A_3-Q^3$ (X⁵) X⁶.
- 26. (Original) A compound as claimed in claim 25, wherein- A_3 Q^3 (X^5) X^6 is identical to $-A_2$ - Q^1 (X^3) X^4 .
- 27. (Previously presented) A compound as claimed in claim 1, wherein D and E together with the carbon atoms of the cyclopentadienyl ring to which they are attached form an unsubstituted phenyl ring.
- 28. (Previously presented) A compound as claimed in claim 1, wherein D and E both represent hydrogen.
- 29. (Previously presented) A compound as claimed in claim 1, wherein D represents $-A_4-Q^4(X^7)X^8$.
- 30. (Original) A compound as claimed in claim 29, wherein $-A_4-Q^4$ (X⁷) X⁸ is identical to $-A_2-Q^1$ (X³) X⁴.

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- 31. (Previously presented) A compound as claimed in claim 29, wherein E represents hydrogen.
- 32. (Previously presented) A compound as claimed in claim 1, wherein E represents $-A_5-Q^5$ (X⁹)X¹⁰.
- 33. (Original) A compound as claimed in claim 32, wherein $-A_5-Q^5$ (X^9) X^{10} is identical to $-A_2-Q^1$ (X^3) X^4 .
- 34. (Previously presented) A compound as claimed in claim 1, wherein A_1 and A_2 , and A_3 , A_4 and A_5 when present, each independently represent -CH₂- or -C₂H₄-.
- 35. (Previously presented) A compound as claimed in claim 1, wherein each A_1 and A_2 , and A_3 , A_4 and A_5 when present are identical and preferably represent -CH₂-.
- 36. (Previously presented) A compound as claimed in claim 1, wherein each Q¹ and Q², and Q³, Q⁴ and Q⁵ when present are identical and preferably represent phosphorous.
- 37. (Previously presented) A compound as claimed in claim 1, wherein n=1, m=0 and L_1 is selected from cyclopentadienyl, phenyl, indenyl or napthyl, preferably unsubstituted cyclopentadienyl.
- 38. (Previously presented) A compound as claimed in claim 1, wherein M represents iron or a metal cation thereof.
- 39. (Previously presented) A compound as claimed in claim 1 obtainable by combining: (a) palladium or a compound thereof; and (b) a compound of formula I as defined in claim 1.

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40. (Previously presented) A process for preparing a compound as defined in claim 1 comprising combining (a) a Group VIIIB metal or compound thereof; and, (b) a compound of formula I as defined in claim 1.

41. (Previously presented) A compound of formula I

wherein A_1 , A_2 , K, D, E, M, L_2 , L_1 , Q^1 , Q^2 , X^1 , X^2 , X^3 , X^4 , N and N are as defined in claim 1.

42. (Previously presented) A process for preparing a compound of formula I as defined in claim 41, comprising reacting a compound of formula II wherein A_1 , A_2 , K, D, E, M, L_1 , L_2 , n and m are as defined for a compound of formula I, and LG_1 and LG_2 represent suitable leaving groups, with a compound of formula IIIa and IIIb

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wherein X¹, X², Q², X³, X⁴ and Q¹ are as defined in claim 1.

- 43. (Original) A compound of formula II as defined in claim 42.
- 44. (Previously presented) A process for preparing a compound of formula I wherein K, D, E, M, A_2 , A_1 , L_2 , L_1 , Q^1 , Q^2 , m and n are as defined in claim 1 and X^1 and X^2 together with Q^2 to which they are attached form a ring system of formula Ia as defined in claim 1 and X^3 and X^4 together with Q^1 to which they are attached form a ring system of formula Ib as defined in claim 1, comprising reacting a compound of formula XV

$$\begin{array}{c} H \\ Q^{1} - H \\ A_{2} \\ H \\ (L_{2})_{m} \\ (L_{1})_{n} \end{array} \tag{XV}$$

wherein K, D, E, M, A_2 , A_1 , L_2 , L_1 , Q^1 , Q^2 , m and n are as defined in claim 1, with a compound of formula XVIa and XVIb

wherein Y^1 , Y^2 , R^{49} to R^{55} are as defined for a compound of formula I.

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- 45. (Original) A compound of formula XV as defined in claim 44.
- 46. (Previously presented) A process for the carbonylation of an ethylenically unsaturated compound comprising contacting an ethylenically unsaturated compound with carbon monoxide and a co-reactant in the presence of a compound as defined in claim 1.
- 47. (Original) A process as defined in claim 46 wherein the co- reactant includes a hydroxyl group containing compound.
- 48. (Previously presented) A process as claimed in claim 46, wherein the ethylenically unsaturated compound comprises ethylene, 1, 3-butadiene, oct-1-ene or vinyl acetate, preferably ethylene.
- 49. (Previously presented) A process as claimed in any one of claims 46, further including the step of including a source of anions.
- 50. (Previously presented) A composition comprising a compound as defined in claim 1 attached to a support.
- 51. (Previously presented) Use of a compound as defined in claim 1 or a composition as defined in claim 50 as a catalyst.